

## REMARKS

The Office Action mailed March 1, 2010 has been reviewed and reconsideration of the above-identified application, as amended, in view of the following remarks, is respectfully requested

Claims 1-7, 9-11, 13-27 and 19-23 are pending and stand rejected.

Claims 1, 19, 20, 22 and 23 are independent claims.

Claims 1, 7, 19, 20, 21, 22 and 23 have been amended.

Claims 1, 9-11, 13-14, 16-18 and 20-23 stand rejected under 35 USC 103(a) as being unpatentable over Aoshima (US 2003/0190551). Claims 2-7 and 19 stand rejected under 35 USC 103(a) as being unpatentable over Aoshima in view of Suzuki (USP no. 6,033,752).

Claims 1, 9-11, 13-14, 16-18 and 20-23 stand rejected under 35 USC 103(a) as being unpatentable over Aoshima. In maintaining the rejection of the claims, the Office Action asserts that Aoshima discloses "the layers are formed of the same materials and of the same total thickness and would be capable of achieving the claimed properties. While applicant may be claiming the parameters of the medium in a different way, i.e., the total thickness of the sub-layers is dependent upon the read wavelength, the reference still meets the limitations. The total thickness of applicant's sub-layers will be a range due to the possibility of using different wavelengths. The range disclosed in the reference overlaps that claimed." (see FOA, page 2).

In addition, the Office Action further states "[t]he reference discloses a recording medium comprising a substrate, a reflective layer, a dielectric layer, a two-layered recording layer, a dielectric layer and a cover layer. The reflective layer and first dielectric layer are equivalent to applicant's 'spacer' layer. See Figure 3 and explanation thereof. The thickness of the recording layers falls within applicant's disclosed range. Therefore, the medium would be capable of

achieving the interference effect claimed. The DVD is recorded upon with a laser which mixes the two layer of the recording layer to form recording marks.

Reading is performed by detecting a difference in reflection of the recorded and unrecorded portions. See [120]."

Applicant respectfully disagrees with and explicitly traverses the rejection of the claims.

In maintaining the rejection of the claims, the Office Action is asserting that because the reference refers to a broad range of thickness that the first and second layer may have, that the thicknesses of the first and second layers may be selected to satisfy the claim element "wherein a distance between a reflecting surface of the as-deposited information layer and a reflecting surface of said at least one additional layer is adjusted to be an integer multiple of a quarter wavelength of a second electromagnetic radiation."

That is, the Office Action appears to believe that because the references disclose a large range of possible thicknesses for the layers that it would be inherent that the thicknesses may be selected to satisfy the elements recited in the claims.

However, no where does either reference provide any teaching or suggestion of determining the thicknesses of the first and second layer based on the wavelength of the second electromagnetic radiation.

Rather, the references disclose selecting the thicknesses of the different layers to satisfy certain manufacturing criteria regarding being too thin or too thick. No where is there any consideration, within the ranges described, that the thicknesses be related to an radiation wavelength.

For example, Aoshima discloses that the "thickness of the first recording layer 11 and the second recording layer 12 is not particularly limited insofar as the element contained in the first recording layer 11 as primary component and the element contained in the second recording layer 12 as a primary component ... but the total thickness of the first recording layer 11 and the second recording layer 12 is preferably equal to or less than 100 nm and more preferably equal to or less than 50 nm." (see para. 0077). Further, Aoshima discloses that if the

"total thickness of the first recording layer 11 and the second recording layer 12 is preferably equal to or larger than 2nm." Otherwise the change in reflection coefficient is too small. (see para. 0079).

Hence, none of the thickness ranges taught by Aoshima for the first and second layers or for any additional (spacer) layer is selected so that the combination of the layers is based on a wavelength of an electromagnetic radiation.

Referring to the working examples of Aoshima disclosed in paras. 123-150, each of these examples refers to the parameters of working example 1 (i.e., second dielectric layer having a thickness of 60nm, a second recording layer having a thickness of 6nm, a first recording layer having a thickness of 6 nm and a first dielectric layer having a thickness of 60nm). The examples then disclose using different materials in the different layers. In para. [0151], Aoshima discloses the use a blue laser beam having a wavelength of 405 nm for recording information.

However, the teachings of Aoshima fails to show that the thicknesses selected for the devices in each of the working examples has any relationship to the wavelength of the laser beam used to read the information contained in the information layer.

Hence, although Aoshima discloses different ranges for the elements of the optical reading medium, Aoshima fails to disclose that the thicknesses of the layer are selected such that "a distance between a reflecting surface of the as-deposited information layer and a reflecting surface of said at least one additional layer is adjusted to be an integer multiple of a quarter wavelength of a second electromagnetic radiation," as is recited in the claims.

Applicant appreciates the examiner's providing further clarification of her reasons for believing the claims to be obvious over the cited reference. However, applicant submits that in the matter of obviousness there is a great emphasis placed on "the importance of the motivation to combine." Yamanouchi

Pharmaceutical Co. v. Danbury Pharmacal, Inc. 231 F. 3d. 1339, 56 USPQ2d. 1641, 1644 (Fed. Cir. 2000).

Applicant submits that in this case, the Office Action has failed to show any motivation for selecting thicknesses of the layers as recited in the claims and has used the elements recited in the claims as a blueprint for inferring that there may be some combination of ranges that satisfy the elements recited in the claims.

In addition, as the Court in the matter KSR Int'l Co. v. Teleflex, Inc., held, "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art... [I]t is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." (citation omitted).

Thus, in this case, the Office Action has impermissibly used the teachings of the instant application as a blueprint to suggest that a combination of thickness values for the first and second layers may be created in a manner that was not contemplated by either reference. (i.e., based on the wavelength of an emission radiation).

Accordingly, applicant submits that a case of obviousness cannot be maintained merely by the references describing thickness ranges in which a combination of thicknesses may satisfy the elements of the claims, as the references fail to provide teaching or motivation to selected or consider the thicknesses of the layers based on the wavelength of the radiation emission.

For the remarks made herein, applicant submits that the rejection of each of the independent claims has been overcome.

With regard to the remaining claims, each of these claims depends from one of the independent claims and, hence, these claims are also not rendered obvious in view of the cited reference by virtue of their dependency upon an allowable base claim.

With regard to the rejection of claims 2-7 and 19 under 35 USC 103(a) as being unpatentable over Aoshima in view of Suzuki, applicant respectfully disagrees with and explicitly traverses the rejection of the claims.

Claims 2-7 and 19 depend from one of the independent claims, which have been shown to include subject matter not disclosed by Aoshima. Suzuki discloses an optical recording medium including a substrate (2), a first recording layer (3), a second recording layer (4), a protective layer (5), and adhesive layer (6) and an upper plate (7). Suzuki discloses that radiation enters the optical recording medium through the substrate layer (2), which is transparent.

However, Suzuki fails to provide any teaching regarding setting a distance between elements as a function of the wavelength of an emission, as is recited in the claims.

Accordingly, the combination of Aoshima and Suzuki fails to disclose the elements recited in the independent claims and, consequently, in the aforementioned dependent claims.

For the remarks made herein, applicant submits that the reason for the rejection of the claims has been overcome and respectfully requests that the rejection be withdrawn and a Notice of Allowance be issued.

Notwithstanding the arguments presented herein, applicant has elected to amend the independent claims to further recite the claim element "a ratio of a thickness of the first layer to the thickness of the second layer is selected so that

all material in the first layer and second layer is converted to the alloy inclusion." No new matter has been added. Support for the amendment may be found at least on page 6, lines 14-23 ("The composition of the alloy may be controlled by selection of layer thickness, layer thickness ratio(s), temperature, cool-down temperature, etc. By selection of these parameters according to the phase diagrams for the respective inorganic materials, an eutectic alloy may be formed, e.g. by selecting a proper ratio between the amount of the first and the amount of the at least second inorganic material. This may be obtained by adjusting the thickness of the individual layers accordingly. It is an advantage of forming an eutectic alloy that the materials form a uniform alloy on the nanometre scale, i.e. an intimate mixture of the first inorganic material in the first phase and the second inorganic material in the second phase, so that no residual parts of the as-deposited materials remain.") and in claim 7.

Applicant submits that nowhere does either cited reference teach or suggest that that the ratio of the thicknesses of the layer is selected in a manner as is recited in the claims.

In addition, claim 7 has been amended to recite that the thickness of the first and second layers are selected to obtain a best possible reflection of the as-deposited layers. No new matter has been added. Support for the amendment may be found at least on page 6, lines 28-29, ("[t]he thicknesses of the at least first and second layers are furthermore selected so as to obtain the best possible reflection of the as-deposited layers..."),

Although the instant Office Action has been made Final, the amendments to the claims should be entered into the record as the claims, which are based on the subject matter recited in claim 7, requires only a cursory search by the Examiner.

Applicant denies any statement, position or averment stated in the Office Action that is not specifically addressed by the foregoing. Any rejection and/or

point of argument not addressed are moot in view of the presented arguments and no arguments are waived and none of the statements and/or assertions made in the Office Action is conceded.

Applicant makes no statement regarding the patentability of the subject matter recited in the claims prior to this Amendment and has amended the claims solely to facilitate expeditious prosecution of this patent application. Applicant respectfully reserves the right to pursue claims, including the subject matter encompassed by the originally filed claims, as presented prior to this Amendment, and any additional claims in one or more continuing applications during the pendency of the instant application.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to contact applicant's representative at the telephone given below. No fees are believed necessary for the timely filing of this paper.

Respectfully submitted,  
Michael E. Belk, Reg. No. 33,357

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/Carl A. Giordano/

By: Carl A. Giordano  
Attorney for Applicant  
Registration No. 41,780

**Mail all correspondence to:**

Michael E. Belk, Esq.  
US PHILIPS CORPORATION  
P.O. Box 3001  
Briarcliff Manor, NY 10510-8001  
Phone: (914) 333-9643  
Fax: (914) 332-0615

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